

Appl. No. 10/517,689
Amendment and/or Response
Reply to Office action of 22 February 2006

Page 2 of 12

Amendments to the Claims:

A clean version of the entire set of pending claims (including amendments to the claims) is submitted herewith per 37 CFR 1.121(c)(3). This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) An antenna having a dielectric substrate (4) having two larger end faces and four smaller end faces and two resonant printed wiring structures, ~~more particularly~~ for use in high-frequency and microwave range, a first printed wiring structure (2) being arranged on one end face of the substrate (4) along a first edge and a second printed wiring structure (3) on an opposite, second edge of the same end face,

wherein each of the first and second printed wiring structures includes,
a first printed wire on the end face extending from a first one of the side faces to a second one of the side faces along one of the edges of the end face,

a second printed wire disposed on the end face in parallel to and spaced apart from the first printed wire, and also extending from the first side face to the second side face, and

a third printed wire disposed on the end face extending between the first printed wire and the second printed wire perpendicularly to the first and second printed wires to connect the first printed wire to the second printed wire.

2. (Currently Amended) An antenna as claimed in claim 1, ~~characterized in that~~ wherein the second printed wiring structure (3) is equal to the first printed wiring structure (2) as regards shape and size.

3. (Currently Amended) An antenna as claimed in claim 1, ~~characterized in that~~ wherein the substrate (4) is in essence rectangular having two larger end faces and four smaller end faces and in that the first and second printed wiring structures

Atty. Docket No. DE-020157

Appl. No. 10/517,689
Amendment and/or Response
Reply to Office action of 22 February 2006

Page 3 of 12

~~(2,3)~~ are deposited on a first end face and stretch out from a first to a second, opposite side face along the edge.

4. (Currently Amended) An antenna as claimed in claim 1, characterized in that wherein the first and second printed wiring structures ~~(2,3)~~ have the form of a rectangular face.

5. (Currently Amended) ~~An antenna as claimed in claim 3, characterized in that~~ An antenna having a dielectric substrate and two resonant printed wiring structures for use in high-frequency and microwave range, a first printed wiring structure being arranged on one end face of the substrate along a first edge and a second printed wiring structure on an opposite, second edge of the same end face, wherein the substrate is in essence rectangular having two larger end faces and four smaller end faces and in that the first and second printed wiring structures are deposited on a first end face and stretch out from a first to a second, opposite side face along the edge, and

wherein each printed wiring structure ~~(2,3)~~ is subdivided into three printed wires ~~(11 to 13)~~ where

- a first printed wire ~~(11)~~ stretches out from the first to the second side face along the edge, and
- a second printed wire ~~(12)~~ stretches out from the second to the first end face, and
- a third printed wire ~~(13)~~ is connected to the first printed wire and the first printed wire is connected to the second printed wire.

6. (Currently Amended) An antenna as claimed in claim 5, characterized in that wherein a fourth printed wire ~~(14)~~ is connected to the second printed wire ~~(12)~~.

7. (Currently Amended) An antenna as claimed in claim 5, characterized in that wherein the first and second printed wires ~~(11, 12)~~ are equally long.

Atty. Docket No. DE-020157

Appl. No. 10/517,689
Amendment and/or Response
Reply to Office action of 22 February 2006

Page 4 of 12

8. (Currently Amended) An antenna as claimed in claim 5, ~~characterized in that~~wherein the third and fourth printed wires ~~(13, 14)~~ are equally long.

9. (Currently Amended) An antenna as claimed in claim 5, ~~characterized in that 6, wherein~~ the first and second printed wires ~~(11, 12)~~ are longer than the third and fourth printed wires ~~(13, 14)~~.

10. (Currently Amended) An antenna as claimed in claim 5, ~~characterized in that 6, wherein~~ the fourth printed wire ~~(14)~~ runs along an edge of the first end face.

11. (Currently Amended) An antenna as claimed in claim 5, ~~characterized in that 6, wherein~~ the first and third printed wires are arranged perpendicular to the second and fourth printed wires.

12. (Currently Amended) An antenna as claimed in claim 2, ~~characterized in that wherein~~ the second printed wiring structures ~~(2, 3)~~ are mirrored on the first end face.

13. (Previously Presented) A printed wiring board on which an antenna as defined in claim 1 is arranged.

14. (Currently Amended) A radio communication device, ~~more particularly for the GPS, DCS/PCS, UMTS and Bluetooth domain, characterized by including~~ an antenna as claimed in claim 1.

15. (New) The antenna of claim 1, wherein each of the first and second printed wiring structures further includes a fourth printed wire disposed on the one end face, and being connected to one of the first and second printed wires and not connected to the other of the first and second wires.

Atty. Docket No. DE-020157

Appl. No. 10/517,689
Amendment and/or Response
Reply to Office action of 22 February 2006

Page 5 of 12

16. (New) A printed circuit board assembly, comprising:

a printed circuit board, and

an antenna mounted on the printed circuit board, said antenna including a dielectric substrate having two larger end faces and four smaller end faces and two resonant printed wiring structures, adapted for use in high-frequency and microwave range, a first printed wiring structure being arranged on one end face of the substrate along a first edge and a second printed wiring structure on an opposite, second edge of the same end face,

wherein each of the first and second printed wiring structures includes,

a first printed wire disposed on the one end face extending from a first one of the side faces to a second one of the side faces along one of the edges of the end face,

a second printed wire disposed on the one end face in parallel to and spaced apart from the first printed wire, and also extending from the first side face to the second side face, and

a third printed wire disposed on the one end face extending between the first printed wire and the second printed wire perpendicularly to the first and second printed wires to connect the first printed wire to the second printed wire.

17. (New) The printed circuit board assembly of claim 16, wherein the first and second printed wiring structures comprise silver paste, and wherein the antenna is mounted on the printed circuit board such that the one end face of the antenna on which are disposed the first and second printed wiring structures is disposed directly on and immediately adjacent to the printed wiring board.

18. The printed circuit board assembly of claim 16, wherein each of the first and second printed wiring structures further includes a fourth printed wire disposed

Atty. Docket No. DE-020157

Appl. No. 10/517,689
Amendment and/or Response
Reply to Office action of 22 February 2006

Page 6 of 12

on the one end face, and being connected to one of the first and second printed wires and not connected to the other of the first and second wires.

Atty. Docket No. DE-020157